REMARKS

With this response, claims 15, 21 and 24 are amended. Claims 16 and 25 are canceled. Therefore, claims 15, 17, 20-22, 24, 26 and 27 are pending.

REGARDING CLAIM AMENDMENTS

Applicants contend that independent claims 15, 21 and 24 as amended are fully supported by the specification.

The independent claims as amended recite scanning a first and a second portion of a database, and identifying transaction items of the first portion and the second portion of the database with an occurrence frequency at least equal to a threshold value. Support for this limitation may be found, for example, in paragraph [0019] of the specification: "[s]ince the search covers half of the transaction database, a support threshold of six (6) is used to create the header table for the FP-tree based on the scan of the first [and the second] half of the database."

The independent claims as amended further recite "building a probe structure based on the identified frequent transaction items with an occurrence frequency at least equal to twice the threshold value." Support for this limitation may be found, for example, in paragraph [0025] of the specification: "At 220, based on the scanned transactions, the logic 102 provides counts in the probe table and updates the header table for the frequent items that meet the minimum support threshold." See also TABLE 4, which shows transactions whose occurrences at least equal 12 (i.e., twice the threshold of 6 as taught in paragraph [0019]).

The independent claims as amended further recite "grouping the branches of the FP-tree into a plurality of groups, the grouping based on the content of the transaction items of each branch, wherein the number of transactions in each of the plurality of groups is substantially

equal." Support for this limitation may be found, for example, in paragraph [0033] of the specification: "a heuristic algorithm may be used to group the transactions of the probe tree into substantially equal groupings for processing."

CLAIM OBJECTIONS

Claims 15, 21 and 24 were objected to because of informalities and have been appropriately amended.

DRAWINGS

FIG. 6 was objected for not being labeled prior art. A replacement sheet has been attached herein to address this objection.

REJECTIONS UNDER 35 U.S.C. § 103

Claims 15, 17, 20-22, 24, 26 and 27 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Han et al. "Mining Frequent Patterns without Candidate Generation: A Frequent-Pattern Tree Approach", *Data Mining and Knowledge* Discovery, pages 53-87 (hereinafter "Han") in view of U.S. Patent No. 6,230,151 of Agrawal et al. (hereinafter "Agrawal") and in further view of Zaki et al. "Parallel Classification for Data Mining on Shared-memory Multiprocessors", pages 1-18 (hereinafter "Zaki").

Applicants respectfully contend that these claims are not rendered obvious by the cited references for at least the following reason: the references, alone and in combination, fail to disclose or suggest at least one feature of the invention as recited in the amended independent claims.

The independent claims as amended recite grouping branches of an FP-tree into a plurality of groups, the grouping based on the content of the transaction items of each branch, **wherein the number of transactions in each of the plurality of groups is substantially equal**. The Office Action on page 5 cites Han to disclose the above feature of the independent claims. Applicants traverse.

Page 81 of Han discloses that "it is important to cluster FP-nodes according to the tree/subtree structure." Applicants point out that said tree structure is shown in FIG. 6 on page 73 of Han. Applicants contend that said tree structure is clearly an unbalanced tree structure with several branches comprising an uneven amount of nodes; thus, because Han discloses grouping (i.e., clustering) nodes according to the tree-subtree structure, Han cannot be cited to disclose or suggest grouping transactions into a plurality of groups of substantially equal numbers. In contrast, the independent claims as amended recite grouping branches of an FP-tree into a plurality of groups, the grouping based on the content of the transaction items of each branch, wherein the number of transactions in each of the plurality of groups is substantially equal. Thus, Han cannot be cited to disclose the above features of the independent claims.

Agrawal and Zaki fail to cure the defects of Han, as Agrawal and Zaki contain no disclosures directed towards grouping branches of an FP-tree into a plurality of groups, the grouping based on the content of the transaction items of each branch, wherein the number of transactions in each of the plurality of groups is substantially equal. Thus, no combination of Han, Agrawal and Zaki may be cited to disclose the above feature of the independent claims.

Furthermore, the independent claims as amended recite assigning, via a master processor, **each group of branches** of the FP-tree to **one** of a plurality of slave processors, the plurality of slave processors to execute the transaction items identified by the respective branch in parallel

with each other. Applicants point out that the Office Action on page 6 acknowledges that Han fails to disclose this feature. The Office Action cites Agrawal to cure the defects of Han. Applicants traverse.

Col. 13 lines 47-51 of Agrawal discloses that "if there are multiple leaves and multiple processors, the group master splits the processor set into two parts, and also splits the leaves into two parts. The **two newly formed processor sets become the new groups**, and work on the corresponding leaf sets." Thus, as Applicants have understood the reference, Agrawal discloses assigning leaf sets to a **group of processors**, which is not analogous to assigning each of a **group of branches** to one (specific) processor. In contrast, the independent claims as amended recite assigning, via a master processor, each group of branches of the FP-tree to one of a plurality of slave processors, the plurality of slave processors to execute the transaction items identified by the respective branch in parallel with each other. Thus, Agrawal cannot be cited to cure the defects of Han.

Zaki fails to cure the defects of Han and Agrawal because Zaki contains no disclosures directed towards assigning, via a master processor, each group of branches of the FP-tree to one of a plurality of slave processors, the plurality of slave processors to execute the transaction items identified by the respective branch in parallel with each other.

Thus, no combination of Han, Agrawal and Zaki supports a rejection of the independent claims. Each of claims 17, 20, 22, 26 and 27 depends from one of the independent claims discussed above. Per MPEP § 2143.03, claims that depend from nonobvious independent claims are likewise nonobvious over the references.

CONCLUSION

For at least the foregoing reasons, Applicants submit that the rejections have been overcome. Therefore, all pending claims are in condition for allowance, and such action is earnestly solicited. The Examiner is respectfully requested to contact the undersigned by telephone if such contact would further the examination of the present application.

Please charge any shortages and credit any overcharges to our Deposit Account number 02-2666.

Respectfully submitted,
BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN, LLP

August 23, 2011   /Eric S. Hiponia/
Date   Eric S. Hiponia
                                         Reg. No. 62,002
                                         Attorney for Applicants

                                         1279 Oakmead Parkway
                                         Sunnyvale, CA 94085-4040
                                         (503) 439-8778

I hereby certify that this correspondence is being submitted electronically via EFS Web on the date shown below.

Date: _8/23/2011_____   /Julie Dussault /_____
                                 Julie Dussault